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BARRED OWLS IN CAPTIVITY.

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CHOCORUA is one of the boldest, most picturesque, and at the same time one of the most southerly, of the White Mountains of New Hampshire. At its southern foot are several small lakes fed by its streams. The chief of these streams is called Chocorua River, and its main lake Chocorua Lake. North of this water, fringing the river for half a mile, is a growth of yellow birch, beech, and hemlock of considerable age and size. The dainty Parula is frequently seen in its gray moss. Cooper's Hawks, Broad-winged Hawks, and Yellow-bellied Woodpeckers are common tenants of its shades. On June 1, 1888, while nest-hunting in its midst, I saw a Barred Owl sitting on the edge of a cavity in a beech. The tree was a giant. The cavity was about thirty-five feet from the ground, on the southwesterly side, and quite large. The Owl did not move, even after I threw a stick at her. Convinced that the cavity was worth exploring, I went home and returned with a friend, a ladder, and a gun. As a result two old birds were shot, and two young ones taken from the nest. The gun was quite necessary, for my friend would have fared badly in climbing if I had not shot the old birds before they could attack him. Their threatening cries and loud snapping of their beaks were quite enough to discourage an unarmed robber.

I wrapped the two young birds in a towel and later placed them side by side in an ordinary canary cage. They were savage, using beaks and claws vigorously. When released in my door-

yard they half hopped, half flew towards the nearest tree, making such rapid progress that I did not risk their loss by a second experiment. For their permanent prison I chose a case in which a piano had been boxed. By standing it upon its end, and nailing perches at different heights, ample space was given the captives. The front of the box was barred horizontally by laths.

On what could the Owls be fed? That was my first problem. Not sharing in the belief of my family that everything in feathers eats dough, I tried raw beef. The birds found it too tough to manage readily, and raw liver was substituted. Nothing could have suited them better, and for the best part of eighteen months liver and beef kidney have been the chief of their diet. For the birds' names the feminine half of my household agreed upon 'Puffy' and 'Fluffy.' At first the names were not of much use, for no one could tell one bird from the other, but it was not long before an event occurred which not only caused them to be readily distinguished, but led to a lifelong differentiation of their characters and careers. Puffy, or he who was thenceforth to be Puffy, caught his left wing between two of the laths, and by his struggles injured it so that it lost most of its usefulness as a wing and became rather an obstruction to his free locomotion. This happened about the middle of June, after my return to Cambridge, and I did not see the Owls again until the second week in July when my long vacation at Chocorua began. I found the birds fifty per cent larger than when I first handled them, and with tempers similarly developed. No one's fingers were safe inside the bars when the young gluttons were hungry. When satiated they were stolid, and did little beyond moving their heads and snapping their beaks. One interesting fact had been developed during my absence: the Owls not only drank water freely, but took prolonged baths whenever fresh water was given them. Their tank was a foot and a half long, a foot wide, and ten inches deep. Their reflections in this comparatively deep and dark pool greatly amused them for a time. On the arrival of fresh water Fluffy was usually the first at the brink, ready to drink several times, and then to step cautiously in. He would test the depth before ducking his head, and then, holding out his wings, he would pump the water under them, flapping his tail and otherwise drenching himself. When thus soaked he became about the size

of a plucked pigeon, the color of a Crow, and a dismal object to look upon. His eyes at such times would stand out from his drenched and drizzling feathers in a most unpleasant way. This habit of bathing has been maintained in all weathers and temperatures. I have seen both birds take their plunges on mornings when the mercury outdoors was not more than 10° F. On such occasions they shiver for hours before drying. After washing, it is their habit to preen each feather in their wings and tails with great care and precision.

During the summer and autumn of 1888, and at intervals since, I have tried various experiments in feeding the Owls. They reject all vegetable substances with the possible exception of cooked oatmeal, although they will sometimes play with apples, grape leaves, fresh twigs, corn silk and husks, tearing them up solely for amusement apparently, and flinging fragments in all directions. Mice they consider a rare treat, and they swallow them without hesitation, head foremost. With birds they are equally pleased, but if one is larger than a Redstart they are quite sure to crush the skull, sometimes eating the head separately, then to pull out the stiff feathers, and after feeling of the wing joints, to swallow head foremost. A Hermit Thrush thus prepared is about the limit of their single swallowing power. They sometimes, especially with larger birds, devour the contents of the abdominal cavity before swallowing the trunk. When an appetizing mouthful has been started on its downward journey the expression of gluttonous enjoyment thrown into their half-closed eyes and distended mouths is something beyond words. One seems to see them taste the morsel all the way down! If a mouthful sticks at first, they jerk their bodies up and down with considerable force, literally ramming it in by concussion. Sometimes the tail of a Warbler thus being lost to sight, remains in one corner of the Owl's mouth. The Owl's practice then is to turn his head towards it far enough to twist the unwilling feathers into the middle of his tongue, and then to swallow violently, always with effect.

With great interest in the result I placed nine live perch and bream in the Owls' tank one morning when they were about three months old. They had never seen fish before. As the light played upon the red fins and bright scales, the birds' excitement was amusing to see. In a very short time, however, they plunged

feet foremost into the water and with almost unerring aim lanced the victims with their talons and flew out with them. Then the head was crushed at its junction with the back bone, the spines were bitten into jelly, and the fish was swallowed. I have seen half a dozen small hornpout caught, disarmed, and swallowed by them in a comparatively short time. Generally all the fish in the tank were caught and killed before any were eaten. Live frogs called for more agility than live fish. When placed on the bottom of the cage or in the water tank, the frogs seemed to realize their danger, and as a rule remained motionless. The Owls would hang their great heads towards them, and eye them intently. The faintest sign of life would lead to a pounce or a desperate chase round the cage. When caught, the frog was subjected to a careful overhauling. Every joint was felt and crushed. As they slid the slippery legs through their beaks they seemed to be searching for spurs or horns which might prevent easy swallowing. Once found spurless, the frog soon vanished. The wood frog seems to be their favorite species, and the leopard frog the least well flavored. Once Puffy caught a toad in the grass, but the creature apparently tasted so unpleasant that it was quickly dropped, while for several minutes the Owl hopped about shaking his head and making motions with his mouth expressive of disgust or even pain. A small salamander was eaten without hesitation.

Once, when unusually hungry, the Owls devoured more than a pint of large, fat earthworms, taking them from my fingers, or picking them up singly with their claws with wonderful dexterity. A plump slug was taken readily by Puffy, but almost instantly flung from his mouth with disgust. Fresh water mussels, abundant in Chocorua Lake, were taken with some hesitation and, I fancied, made Puffy miserable.

Flies, harvest flies, dragon flies, grasshoppers, and beetles of various kinds all proved enjoyable tidbits. But of snakes and turtles the Owls stood in terror during the summer of 1888. The appearance of either led the birds to make desperate efforts to escape between the upper slats of their cage. What was my surprise then, in the summer of 1889, to find that so far as snakes were concerned, timidity was changed to curiosity, and curiosity quickly transformed into an eager desire to catch, kill, and swallow. Even a dead milk snake, three feet long and fat, was eaten

piecemeal until only the well-picked skeleton remained. This was done in August, 1889. Small green snakes were seized by their middle and swallowed doubled, while still writhing.

Generally fresh meat is greatly preferred to that which is stale. I have seen both Owls retire in disgust to the top of their cage when some thoroughly offensive liver was offered them. On the other hand they devoured the skinned carcass of a Broad-winged Hawk when it was in almost as advanced a stage of decay, and once recently, when I placed a piece of luminous kidney in their closet at night, Puffy instantly pounced upon it. I have no doubt from other experiments that the light of the decaying meat, and not its smell, was what attracted him.

On one occasion I found a large number of mice in a barrel of excelsior. Carefully taking out most of the packing, I placed Puffy in the bottom of the barrel. The mice spun round him in confusing circles, but with great coolness he caught one after another until nineteen were disposed of. The Owls between them ate the entire number within six hours. Puffy is also expert in catching and killing chipmunks, when placed with them in a barrel. After seeing one or two let out of a box trap for his benefit, the sight of the trap was enough to bring him to the door of the cage ready to act as executioner. The junction of the head and body of a vertebrate is the point always chosen for the first effective use of the beak. The struggles of a dying victim seem to cause a certain cat-like excitement and pleasure.

During the warm months the Owls require food daily, and in considerable quantities. As cold weather comes on, their demands grow more moderate, and in midwinter they eat little and seem drowsy most of the time. Once or twice I have failed to feed them for nearly a week after giving them a hearty ration. In summer, when fed frequently, and on mixed animal food, they often eject from their throats round pellets made up of the bones, hair, feathers, or other undigested portions of their preceding meal. Once or twice these ejections have been extremely offensive in odor. When hungry the owls betray the fact by whining cries. When fed, if both secure a hold on the first piece of liver, a spirited tug of war ensues, wings, beak, free foot, and tail all being used to gain ground. During such a scrimmage a queer chattering with an undertone of angry whining is kept up, but I never have seen either bird attempt to wound or really injure the

other. Food not required by one of the Owls for immediate use is always hidden in a corner, and often guarded with care against appropriation by the other.

Contrary to my expectations the Owls are not appreciably more active in twilight hours than at other times, and I think they are quiet, possibly asleep, at night. I am certain that in an ordinary degree of darkness they cannot see. If the light goes out while Fluffy is flying in my cellar in the evening, he is sure to crash into something or fall heavily to the ground. I have held Puffy close to a cat in the dark, and he was wholly unaware of her presence. Neither of them has ever shown a dislike for sunlight, and, as will be seen hereafter, they can see without difficulty in the face of the brightest natural light. While watching anything which interests them they have a most characteristic habit of throwing their heads far forward and then swinging them about like signal lanterns, or waving them back and forth and up and down, as if seeking the clearest avenue of vision to the object of interest. This trick is probably due to their ancestors' peering through thick branches in search of prey.

About the third week in September, 1888, the Owls were sent by freight from Chocorua to Cambridge. The journey failed to disturb them, and they took kindly to city life in a sunny corner of my cellar. Their near neighbors were my hens, who resented deeply my early experiments in letting the Owls out in their narrow dominion. The hens fought them bravely when brought to close quarters. My first test with the Owls at liberty proved that they neither feared me nor desired to attack me. They recognized me as their caterer, and hailed my approach with noisy demands for food. I began handling them with heavy gloves which their beaks and talons made little impression upon. Gradually I came to use my bare hands, and with Puffy especially I was soon on familiar terms. The way in which I accustomed him to handling was by first rubbing the top of his head with one finger, and then softly rubbing the back of his head and neck with my finger tips. During the process he seemed almost mesmerized, although occasionally he would recover himself and make a swift snap at my retreating fingers. In the course of a few weeks I gained sufficient influence over both birds to carry them about with great freedom, always beginning by pushing their heads down, and then clasping them round their bodies just be-

low the wings. If turned on their backs while thus held, they remain entirely quiet.

During the greater part of the long winter I keep them in a closet in my main cellar. I found to my cost that I could not keep them in the sunny cellar where my hens were, for the reason that they caught and ate some of my pullets and terrified the survivors so that their lives were a burden. Their only delicacies in these months are mice. Their attitudes in chasing a dead mouse dragged over the cellar by a string are striking. Fluffy sails noiselessly over the ground with feet pointed forward and claws ready to close, but Puffy, unable to fly, stalks across the floor, his head pushed forward, and his feathers drawn away from his legs.

As the spring of 1889 came on, the Owls became tuneful after their kind. The quality of their sounds suggested feline music, while their accent and metre often aroused my roosters to responsive crowing. They seldom hooted more than once or twice, and then in the early evening.

With the coming of warm weather and the return of birds in the spring of 1889 I began a series of experiments with Puffy which proved of considerable interest. I had found that he was willing to be carried about while perching on a short stick. Taking him in a basket to some woods in the suburbs of Cambridge, I displayed him to the Robins, Pigeon Woodpeckers, Vireos and Warblers which chanced to be at hand. No impresario ever was more delighted at the success of a new star. A full house gathered at once. Armed with a field glass I had the satisfaction of studying at short range the whole bird population of the neighborhood. The Robins, Brown Thrushes and Pigeon Woodpeckers were the noisiest, the Oven-birds and Red-eyed Vireos the most persistent, the Chickadees the most indignant. The Woodpeckers went so far as to fly past the Owl so close as to brush his feathers and make him jump at each charge. On May 12, during a three hours' walk, I saw over forty species of birds, many of which—as for example, Nashville and Prairie Warblers—I had unusual and ample time to study through my glass, thanks to their interest in the Owl and consequent indifference to me. It was not, however, until my long vacation in Chocorua, beginning July 6, that I really had time to ascertain the full value as a magnet of my patient little bird companion.

The Owls made the journey back to the mountains with perfect composure. On being returned to their piano-box cage they promptly sought their respective corners, and showed in many ways their recognition of old surroundings. This power of memory was even more strongly shown on their arrival in Cambridge in October, 1889, when Fluffy flew across the cellar in search of a favorite perch which had been removed, and the absence of which caused him to end his flight in an ignominious tumble.

On my arrival at Chocorua I began to keep systematic account of all birds seen each day, making careful allowance for birds seen twice in the same day. Between July 6 and Oct. 14, I recognized 9,782 birds, representing 95 species. On nearly half the days in this period Puffy was my companion on my walks and rides. At first it was not easy to induce him to leave his cage and accompany me, but after a few lessons he consented to step from his perch upon the short pine stick on which I used to carry him, and to remain clinging to it while I walked or ran, scrambled over ledges, or forced my way through thickets and brambles. He went more than once to the heights of Chocorua; passed hours travelling through dark woods and high pastures; or perched resignedly on the sharp prow of my Rushton boat, watching dragon-flies skimming the surface of the lake, and his own image reflected in the water. In the woods if I held him too near a tempting log or projecting branch he would hop off. Sometimes he would weary of my walking, and, jumping to the ground, would scurry away to cover and snap his beak angrily if I poked his perch in towards him and told him to "get on." As the summer wore on he grew more and more obedient and less inclined to nip my fingers on the sly as he had a way of doing when I first carried him about. This winter I have trained Fluffy to step up beside his mate and submit to being carried around the house on a perch.

Whenever on my summer walks I came to a spot which I wished to 'sample' for its birds, I would place Puffy on a bending sapling, and hiding in the neighboring foliage, I would 'squeak' by drawing in my breath over the back of my hand, and attract the attention of any birds which were near by. Usually in the deep woods the first comer was a Red-eyed Vireo, Chickadee, Hermit Thrush, or Oven-bird; but whichever it chanced to be, an alarm was almost sure to be given that would bring birds

from all directions eager to see the cause of disturbance. Even when I was imperfectly concealed, the irritated crowd paid little attention to me, provided I kept reasonably quiet. Sometimes I would leave the Owl in comparatively open ground on a boulder in a pasture, or a stump in a meadow. Then his favorite position was with his head tipped directly backward and his eyes, half closed, fixed either on the sun or a spot not ten degrees from it. I never could fully understand this attitude, but I soon found that the Owl was keenly alive to anything passing skyward, for if a Hawk or Crow came into view far away in the deep blue, Puffy's gaze was instantly turned full upon the growing speck, the eyelids partly closed and a most intent look coming into his eyes. Again and again Puffy has seen Hawks or Gulls overhead which my eyes, although unusually far-sighted, have at first been unable to discern. On one eventful day he showed me 334 Hawks sailing southwest under the pressure of a stiff northeast gale. It was September 10, one of the later of the days when the fires were raging among the forests along the St. John River. The Hawks were most of them flying very high. I saw none before 9 A. M. or after 2.15 P.M. I think Puffy saw every one of them. It mattered not whether they came singly or in bunches of twenty to forty, his ever ready eye was upon them as soon as they came into view. In spite of this marvellous power of detecting moving objects in a bright light, my pets often utterly ignore some dainty morsel merely because it does not move. Their sense of smell is either weak or uncertain in its action. Their hearing on the other hand is acute, although not depended upon in the same degree as their sight.

Of the various families of birds which Puffy annoyed during the summer of 1889 none were more distressed and angered by his presence than the Woodpeckers, Thrushes, and Vireos. In every hemlock swamp the Yellow-bellied Woodpeckers and Flickers said their say against his character with petulant emphasis. The Flickers often flew close to his head. Downies and Hairies liked him no better, but were less demonstrative. It was when a venerable and fiery-tempered Logcock caught sight of him on August 21, that the full force of Woodpecker eloquence was let out. Puffy seemed to recognize a hereditary foe, for before the Pileated came into my view the Owl suddenly changed his

appearance from rough-feathered and sleepy content to an astonishing resemblance to an old moss-grown stump. He effected the transformation by standing up very straight, nearly closing his eyes, and making his feathers lie absolutely sleek against his attenuated body. Once on another occasion when he ran away from me, he climbed to the top of a small oak stump and made himself look so like a continuation of it that I passed him four times without detecting his presence. Not so the Pileated, for with a shrieking cackle, his crest gleaming in the sunlight, he flew at the Owl so savagely that I expected to see my pet slain on the spot. He only ruffled Puffy's feathers, however, and made the poor bird unhappy for some time by his discordant cries and frequent flights and counter flights.

Of the Thrushes, the Robins took the Owl most to heart. More than once in black cherry time I have seen sixty to a hundred of them within twenty-five feet of him. Their blended cries always drew Hermits and Swainsons from the woods, Cedarbirds from their cherry feasts, and detachments of Warblers from woods and meadows. The Veeries seemed to care least about their enemy; the Hermits said little, but did some hard thinking. The Swainsons, especially after sunset, had a good deal to say in a refined way, flirting wings and tail meanwhile. The numerous Catbirds and occasional Thrashers were coarsely abusive. Through it all Puffy made no remarks, and seldom stirred; he found out long ago that he could not catch birds.

The ubiquitous Red-eyed Vireo never wearied of staring at Puffy, and firing at him his suspicious, expostulating 'cree'! By roadside and meadow, upland pasture, and in the deeps of the beeches, the Red-eye was always present. Even in the haunts of the Juncos and White-throated Sparrows on the high ledges of Chocorua he was not absent. My count of birds in July showed him to be inferior in numbers only to the Barn Swallow, the Cedarbird, and the Robin. Far less numerous, but a leader among the haters of the Owl, was the Blue-headed Vireo. I had seen little of the bird in previous seasons, but Puffy seemed to draw one or more of them from every considerable area visited. Their scolding reminded me of an angry June-bug in a bottle.

As a rule the Sparrows cared little for the Owl. Purple Finches would come and look him over, the female making a sweet little note of inquisitive protest, and then go away.

Goldfinches did about the same, showing no anger. Grass Finches sat about on boulders and said little, and their friends, the Field Sparrows, behaved similarly. In large swamps one or two Rose-breasted Grosbeaks generally came to see what caused so much outcry but they never approached close to the Owl. During the flight of Juncos, White-throats, and White-crowned Sparrows in October, these species seemed to care almost nothing about Puffy after a first bustling visit of inquiry.

A bird of great individuality and irregular distribution is found in the Chocorua country in considerable abundance. I refer to the Great-crested Flycatcher, which, by the way, always places snake skins in those of its nests that I find. No amount of bird clamor will bring this self-contained and suspicious citizen near my Owl. He has his own affairs to care for, and he has a contempt for brawls and gossip. Similar indifference was shown the Owl in a less marked way by the smaller Flycatchers, but the Kingbirds maintained their reputation for bullying, by attacking Puffy and striking him lightly again and again by well-directed darts from above.

The Swallows and Swifts delighted to tease the Owl by dashing past him and fanning him with their wings. They showed no fear or hatred. Kingfishers took no notice of him. The Black-billed Cuckoo came near, and had a good deal to say in a reproachful voice, but its controlling emotion seemed to be curiosity rather than fear. Late one afternoon in August (the 2d) I placed Puffy in the midst of a white birch grove near a brook. A Cuckoo opened the opera and brought some Vireos including two Solitaries. Their explosions were audible a long way, and for a moment or two the air seemed full of birds, nearly all Warblers, and all coming towards the Owl. I could not count them; they came by scores and swarmed about incessantly like bees. Most of them were Black-and-white Creepers, Black-throated Greens, Chestnut-sideds, Black-and-yellows, Canadians, and Redstarts, young birds predominating. I never expect to see more Warblers in one noisy bunch. As a rule, however, a glance or two seemed to satisfy them, and they went off after their suppers. Of all the Warblers, the Oven-birds were the only ones at all persistent in abusing Puffy. They would come quickly and stay long, with ruffled feathers and anxious notes. One day (July 14) while exploring some dense

spruce thickets on a high ridge of Chocorua I came across a pair of Blackpoll Warblers. They were much excited by the Owl and joined with Juncos and White-throats in prolonged complaining at his presence. A White-winged Crossbill, flying by at the moment, alit and looked us over, but was apparently not at all interested in Puffy.

Another bird which never showed any special emotion on seeing the Owl, no matter what the season, was the Scarlet Tanager. As a rule it took no notice of the Owl's presence. Cedarbirds were similarly indifferent even when the Owl was near their nests or young.

Crows and Blue Jays showed great hatred of the Owl. In the late summer the Jays prowled about in considerable flocks. By 'squeaking' I could draw them near enough to see the Owl, and then the harshest and most violent kind of bird abuse would be poured out on Puffy's head. Jays certainly have a broad knowledge of profanity. The Crows were scarcely less demonstrative; circling low over the Owl, they made the woods ring with their angry clamor. I found that I could attract them by hooting like my pets.

As a rule the Hawks cared little for the Owl. I shot one young Cooper's Hawk near its nest because my calling and the Owl's moving about induced the creature to fly up, tree by tree, until within range. On July 23 while 'squeaking' I was astonished to see an *Accipiter velox* make a dash at Puffy, scaring him into his stump-like condition of plumage and attitude. I continued to 'squeak', and the Hawk flew straight at my head, grazed my face, and lit near by. Soon a second came, but was more wary. I amused myself with them for half an hour, and again on another day a week later. On no other occasion do I remember a Hawk's taking any notice of Puffy, although in many instances he has betrayed their presence by his change of shape and expression. Once while walking with him along the shore of Chocorua Lake he changed his whole appearance in the twinkling of an eye, and as I turned to follow his gaze I saw an Eagle strike the water near by, dashing the foam high into the air.

About sunset on August 12, 1889, I heard a Barred Owl hooting near a small lake close to the foot of Chocorua. Two of us set out at once with guns and reached the crest of a kame near the lake just as the moon rose. After waiting quietly until weary,

I began hooting, and to my surprise and delight an Owl responded from a tree close by. I hooted again; it came nearer. Then I 'squeaked,' and the next second I hastened to hide my head in the bushes, for the wings of an Owl had brushed my face in the darkness, making cold shivers run down my back. We fired three times at this Owl and another which joined him, but failed to kill either. After amusing myself and others several evenings by calling the Owls in this way, I took Puffy with me and placed him on a swinging bough where he was plainly visible to crepuscular eyesight. Several Swainson's Thrushes found him out before twilight faded, and complained softly at his presence. When all was still, I hooted, and soon an Owl replied from the farther shore of the lake. Continuing to call, I had the satisfaction of seeing my bird fly close over Puffy's head and alight within easy range, another Owl at the same time beginning to hoot close by. I shot one and was satisfied. Puffy and Fluffy always show great excitement when wild Owls hoot at night, and occasionally Fluffy replies.

The only other Owl which I have seen thus far in the Chocorua region is the Acadian. On July 18, about six P.M., listening to four Great-crested Flycatchers signalling each other in a wooded pasture, I noted an unusual commotion among Robins, Hermits, and Vireos in a bunch of alders not far away. Creeping in, with Puffy held before me, I saw the scolds surrounding a buff-waistcoated young Acadian perched about five feet from the ground on an alder. He saw Puffy, and Puffy looked at him with interest and attention. The agony in the little bird's yellow eyes was pitiful. He gazed long, and then, turning his head slowly away, sailed noiselessly out of sight, followed by the gossips.

There are several of the Chocorua birds which I have not named in connection with the Owl. The Bluebirds seemed grieved to think anything so wicked could exist. They perched near him and seemed to be trying with their sweet tones to induce him to give up being an Owl. The Kinglets cared nothing for him, even when their curiosity was aroused by the abuse of Chickadees, who were among the noisiest of Puffy's visitors. Both Nuthatches are common near Chocorua, and both showed by brief, business-like remarks what they thought of Puffy. Winter Wrens told Puffy plainly that he was a thief. The Indigo-bird was one

of the few Finches which seemed much disturbed by him. The Towhee showed moderate excitement. The *Icteridæ* are uncommon in the Chocorua region, and none of them met Puffy in his native meadows. About Cambridge, however, Orioles, Red-wings, Crow Blackbirds, and Cow Buntings all showed marked excitement and anger at his presence. Nighthawks and Whip-poor-wills have not met Puffy. I hope next summer to arrange an interview with a Whip-poor-will who haunts my pasture bars. Once or twice Hummingbirds have buzzed a moment near Puffy's head, as if adding their small tribute of hatred to the general estimate of his character.

None of the few species of game and water birds found near Chocorua Lakes have seemed to show any interest in the Owls.

I have recently taken Puffy to Chocorua in the season of snow. Of the eight species of birds met only four saw the Owl. They were Chickadees, Red-bellied Nuthatches, Redpolls, and Blue Jays. They all scolded him, but not with the average summer emphasis. The Redpolls showed only mild curiosity which soon expended itself in gentle reproachful phrases. Puffy did not mind cold, but the light from the snow seemed to blind him. Indoors he held two young hounds at bay, and made their lives miserable by refusing to allow them to come near his corner without risking an attack from his beak and claws. With dogs and cats outdoors he always shows fear unless they come to close quarters; then, as indoors, he spreads and arches his wings, raises his feathers on his back, lowers his head, and snaps his beak, sometimes making swift rushes with an expression so fierce that I have yet to find any quadruped willing to defy him.

A SUMMARY OF OBSERVATIONS ON THE BIRDS OF THE GULF COAST OF FLORIDA.

BY W. E. D. SCOTT.

(*Concluded from p. 22.*)

***Anthus pensilvanicus*.** AMERICAN PIPIT.--In the interior of the State I have noted this species as early as November 1. This was at Ocala in 1879. On the Gulf coast the birds appear in small numbers the latter part